

WHAT IS CLAIMED IS:

- 00706257-031401
1. An electronic component lead inspection device, the device comprising:
- a pickup header for picking up an electronic component package to move same;
 - 5 a light source for illuminating a light to the electronic component package;
 - acquiring means for acquiring an image of the electronic component package underneath a travelling passage of the electronic component package;
 - control means for outputting an image signal of the electronic component package acquired by the acquiring means; and
 - 10 inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.
2. An electronic component lead inspection device, the device comprising:
- 15 a pickup header for picking up an electronic component package to move same;
 - a reflecting plate attached to the pickup header;
 - a light source for illuminating a light to the reflecting plate;
 - acquiring means for acquiring an image of the electronic component package underneath a travelling passage of the electronic component package;
 - 20 control means for outputting an image signal of the electronic component package acquired by the acquiring means; and
 - inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and display the image of the electronic component package.
 - 25
3. An electronic component lead inspection device, the device comprising:
- a pickup header for picking up an electronic component package to move same;

a reflecting plate attached to the pickup header;
a first light source for illuminating a light to the reflecting plate;
a second light source for illuminating a light to the electronic component package;

5 acquiring means for acquiring an image of the electronic component package underneath a travelling passage of the electronic component package;

control means for controlling the first light source to illuminate a light if the electronic component package is a gull wing type electronic component package and for controlling the second light source to illuminate a light if the
10 electronic component package is a ball grid array type electronic component package and for outputting an image signal of the electronic component package acquired by the acquiring means; and

inspecting and displaying means for receiving the image signal of the electronic component package output from the control means to inspect and
15 display the image of the electronic component package.

4. An electronic component lead inspection device, the device comprising:

a tray for moving an accommodated electronic component;
a light source for illuminating a light to the electronic component package;

20 acquiring means for acquiring an image of the electronic component package above a travelling passage of the electronic component package;

control means for outputting an image signal of the electronic component package acquired by the acquiring means; and

inspecting and displaying means for receiving the image signal of the
25 electronic component package output from the control means to thereby inspect and display the image of the electronic component package.

5. The electronic component lead inspection device as defined in any one of claims 1 to 4, wherein the acquiring means comprises:

image transfer means for transmitting images of bottom view and side

views of the electronic component package; and

more than one camera for acquiring the images of bottom and side views of the electronic component package transferred through the image transfer means.

- 5 6. The electronic component lead inspection device as defined in claim 5, wherein the image transfer means comprises:

a first image transfer means for transmitting a bottom view of the electronic component package to a camera;

- 10 second and third image transfer means for combining images of mutually facing side views of the electronic component package to thereafter transfer same to a camera.

7. The electronic component lead inspection device as defined in claim 6, wherein the first image transfer means comprises at least more than one reflecting mirror for reflecting the bottom view of the electronic component package to thereafter
15 transfer same to a camera. A

8. The electronic component lead inspection device as defined in claim 6, wherein the second and third image transfer means comprise:

more than two reflecting mirrors for respectively reflecting images of mutually facing side views of the electronic component package; and

- 20 more than one right angle prism for combining images respectively reflected by the reflecting mirror to the one camera.

9. The electronic component lead inspection device as defined in claim 6, wherein the camera comprises:

25 a first camera for acquiring a bottom view of the electronic component package transmitted from the first image transfer means; and

second and third cameras for acquiring respective images of side views of the electronic component package combined and transmitted thereafter by the second and third image transfer means.

10. The electronic component lead inspection device as defined in claim 5, wherein the image transfer means further comprises a height adjusting means for adjusting heights of the camera.

11. The electronic component lead inspection device as defined in claim 10, wherein the height adjusting means comprises:

a guide rail formed at one side of a housing;

a guide plate integrally formed at the camera to upwardly and downwardly move the camera along the guide rail; and

fixing means for fixing the guide plate to the guide rail to thereby fix a position of the camera.

12. The electronic component lead inspection device as defined in any one of claim 1 to 4, wherein the acquiring means comprising:

image transfer means disposed on an upper portion of a housing to transfer image of bottom and side views of the electronic component package; and

first, second and third cameras provided underneath the housing to respectively acquire bottom and side views of the electronic component package transmitted via the image transfer means, while the image transfer means comprises:

a pair of reflecting mirrors centrally arranged at a housing for twice reflecting at right angle a bottom view of the electronic component package to thereafter transfer same to the first camera;

four reflecting mirrors respectively disposed at four side views of the housing to reflect four side views of the electronic component package lengthwise of the housing;

four right angle prisms mounted at four side views of the housing to respectively face the four reflecting mirrors to reflect at right angle the images of four side views reflected from the four reflecting mirrors relative to lengthwise direction of the housing; and

0923252401

two right angle prisms respectively disposed between two facing right angle prisms out of the four right angle prisms to combine images of two side views of the two facing electronic component package and to respectively transfer same to the second and third camera.

- 5 13. The electronic component lead inspection device as defined in any one of claims 1 to 4, wherein the acquiring means comprises:

image transfer means for transmitting a bottom view of the electronic component package; and

- 10 more than one camera for acquiring the bottom view of the electronic component package transmitted via the image transfer means.

14. The electronic component lead inspection device as defined in any one of claims 1 to 4, wherein the acquiring means comprising:

image transfer means for combining and transmitting images of mutually-facing side views of the electronic component package; and

- 15 more than one camera for acquiring images of side views of the electronic component package transmitted from the image transfer means.

15. The electronic component lead inspection device as defined in any one of claims 1 to 4, wherein the acquiring means further comprises a glass plate for permeating images of the electronic component package but for preventing
20 foreign objects such as dust, mold flesh and the like from entering the acquiring means.

16. An electronic component lead inspection device adapted to transmit an image of an electronic component package by way of image transfer means and to acquire the image transmitted by the image transfer means by way of a
25 camera, wherein the image transfer means comprises:

more than two reflecting mirrors for respectively reflecting images of mutually facing side views of the electronic component package; and

more than one right angle prism for combining images respectively

00786357-034401

reflected by the reflecting mirrors to transfer same to the one camera.

Add
A1

00786357-031401